



KVF-3X series pull-out rackmount monitors

USER MANUAL

Shenzhen Konvision Technology Co., Ltd
<http://www.konvision.com>

Contents

Notes	3
Security	4
Screen Maintenance	4
Cabinet Maintenance	4
Installation	5
Rackmount Installation	5
Transportation	5
Features	6
Parts and Their Functions	9
Front View	9
Rear View	12
OSD Menu	13
Menu Structure	13
Menu Operation	15
Menu Item Description	16
A. Picture	16
B. Img. Adj	16
C. Setup	18
D. Audio	20
E. PIP/PBP	21
F. Status	23
Factory Reset	23
Remote Control	24

●Notes

For the safety use of products, please read the following instructions regarding the installation, use and maintenance carefully.

- . Please read the product safety and operating instructions carefully before the product is operated.
 - . Please keep the safety and operating instructions for future reference.
 - . Please pay strict attention to the warnings and implement the products according to the operating instructions closely.
 - . All operating instructions should be strictly enforced.
1. Please use the power cord recommended by manufacturer.
 2. Please do not place heavy objects on the power cord.
 3. Please do not expose the monitors to rain, humid, dusty places.
 4. Please do not place vessels with liquid (such as cups, beverage bottles) on the monitor.
 5. Please do not place this product in high heat places.
 6. Please make sure the earth terminal is good in order to avoid electric shock.
 7. Please do not open the back cover to avoid electric shock. Please contact professionals for service need.
 8. If the sound turns abnormal, please do not use the monitor for a long time..
 9. Do not place this product at unstable places such as cars, shelves or tables, as it is easy to make the product falling down, may cause severely hurt to children and adults and also damage to the product.
 10. Please do not touch the power plug with wet hands, as it will cause electric shock.
 11. Please do not expose the LCD panel in direct sunlight for a long time, it will result in damage or aging of the LCD panel.
 12. Please display this product at a suitable temperature and humidity place.
 13. Please do not spray any liquid things and/or add any objects into the monitor, it might cause voltage instability and short-circuit, also can easily cause fires and blackouts.

14. If do not use the device for a long time, please unplug the power cord from the AC outlet.
15. Please keep not less than 5cm space around the vents while using the monitor, in order to obtain good heat dissipation effect.

●Security

Screen Maintenance

Please follow the below guidelines carefully to prevent discoloration, stains and scratches on the screen:

- Avoid striking the screen with any object.
- Do not wipe the screen hard.
- Do not wipe the screen with solvents such as alcohol, thinner or gasoline.
- Do not spray detergent or other cleaners on the monitor or LCD panel, as it may cause fault because of water droplets into the monitor.
- Do not write on the screen.
- Do not paste or stick any viscous markers on the screen.

Screen may be cleaned by gently wiping with lint free cloth to remove dust. For the more difficult cleaning, use lint free cloth that has been very lightly dampened with detergent, then dry any excess moisture from the monitor or LCD panel immediately to prevent damage.

Cabinet Maintenance

Please follow the guidelines below to prevent potential damage.

- Do not wipe the cabinet with solvents such as alcohol, thinner or gasoline.
- Do not use any pesticides and/or other volatile substances.
- Do not allow prolonged contact with rubber or plastic.
- Do not wipe the cabinet hard. Use a soft, lint free cloth to clean. If the cabinet cleaning is more difficult, use lint free cloth that has been very lightly dampened with detergent and

then dry it to wipe.

Installation

- Keep adequate air circulation to prevent device internal overheating. Please do not place the product on the surface of some certain objects (such as blankets, carpets, etc.), as these objects may block the vents.
- Please keep the device away from heat generating sources, such as radiator, heaters and air duct, also keep it away from much dust or mechanical vibration place.

Rackmount Installation

- For rack mount installation, please keep 1U space from both top and bottom to make sure adequate air circulation, or install an external electric fan. Please follow the instructions and install with the rack mounts provided by manufacturer.

Transportation

- This monitor is precise equipment and need professional packing materials to transport. So do not to use packing materials provided by suppliers except KONVISION or its authorized packing material suppliers.

When the following situations occur, please turn off the power, do not insert the plug and contact a professional service staff to deal with timely.

- A. This product smells smoke and off-flavor.
- B. When this product displays abnormal operating conditions, such as there is no picture or sound.
- C. When any liquid is splashed into the product or product dropped.
- D. When the product soaked or fall into the water.
- E. When the product has been damaged or other damage circumstances.
- F. When the power cord or plug is damaged.

The following does not belong to failures:

1. If the static image displayed too long, it will have residual image, which should be attributed to the characteristics of LCD display but not a failure. Residual image will disappear automatically after a period of time.
2. If this device used in a cold environment, the screen may appear residual image. This is not a product failure, when the monitor temperature changes, screen will return to normal conditions.
3. LCD screen may appear tiny spots (red, blue or green), this is not a fault, LCD screens are manufactured with high precision technology, and a small number of pixels may not be able to show intermittent.
4. Lightly vibration when you touch the monitors.
5. Screen and cabinet will become warm gradually during operating.
6. When it appears cracked sound
7. When it appears sound of mechanical vibration.

●Features

High resolution LCD panel

- LED backlight and high resolution. High contrast, high-speed response and wide viewing angle technology make the monitor can be used under variety of lighting conditions.

Lightweight design

- Reduce installation space and load for OB vans, etc.

High brightness LED Tally Indicator

- Two colors Tally indicator as red and green, to monitor each input signal and check ON-AIR mode.

Color system (PAL, NTSC, SECAM)

- This unit detects the color system automatically.

3D video decoder

- Process 3D decoding on VIDEO signals, to realize better reduce cross color.

Motion-Adaptive Interlace to Progressive

- It converts interlaced video to progressive video by motion detection, reduce the serrated image.

10BIT Signal Processing

- Signal input, signal processing and image output are 10bit data processing, to ensure the details display of the image.

Y/C Input

- Decomposition for the luminance signal (Y) and chrominance signals (C) of the video signal can be input through this connector.

SDI Input

- 3G/HD/SD-SDI video signal can be input through this connector.

YPbPr Input

- YPbPr video signal (Compatible YCbCr) can be input through this connector.

HDMI/DVI/VGA Input

- HDMI signal can be input via HDMI to DVI-I convertor through DVI connector, DVI signal can be input through DVI connector, VGA signal can be input via VGA to DVI-I convertor through DVI connector.

Signal Source Loop through

Signal that linked to the input connector will be enlarged and linked to output connector.

PIP/PBP

- Two channel SDI inputs signals display simultaneously under PIP (picture in picture) and PBP (picture by picture) mode. One SDI input signal can be also displayed with another signal of VIDEO, S-VIDEO, COMPONENT, HDMI simultaneously, and showing two pictures on the screen.

SWAP Function

- In PIP/PBP mode, two pictures can be swapped between each other.

Color Temperature

- Different color temperatures can be selected freely and can be customized R G B gain and offset.

Image Size Setting

- The display mode is switchable among 16:9, 4:3, full screen, 1:1, and the original aspect ratio.

Marker Setting

- Show frame borders, center marker, and safety area, etc.

HV Delay

- Display horizontal and vertical blanking area of SDI2 input signal.

Scan mode

- Scan mode includes Full Scan, Over Scan.

Part Zoom In

- Zoom in any part of the picture, to watch picture details more clearly, and assist for focus.

Audio level meter (UV+PPM)

- Show the audio level meter (UV+PPM) for SDI embedded audio

Brightness histogram

- System automatically analyzes the input signal's brightness distribution with a diagram on the screen. X coordinate shows the brightness sampling value, the range is 0 ~ 1023, the higher value means the higher brightness. Y coordinate shows the percentage of the brightness in the entire frame picture.

Vector scope

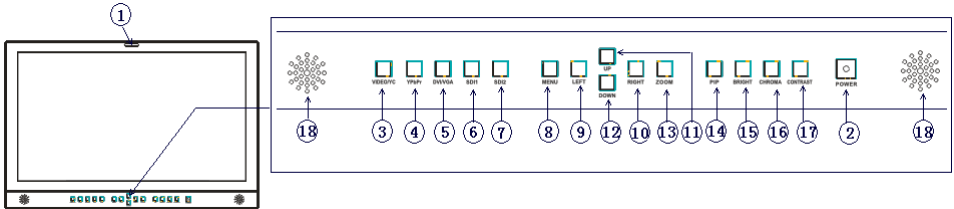
- Vector UV analysis for color bar signal input

Remote control function

- Available to connect to the remote terminal to operate the equipment to directly select the input signal, longitudinal mode settings etc

●Parts and Their Functions

Front View



(1) Tally Indicator

It is controlled by the tally function of the RS232 port, with two colors red and green.

(2) Power Button and Indicator

When the external DC power supply with electricity, the indicator light is red. Press this POWER button to power on the monitor, and the indicator light turns blue. Press this button again to turn off the monitor, the indicator light turns red.

(3) Video/YC Button and Indicator

Press this button to select input signal between Video and S-video, indicator turns blue.

(4) YPbPr Button and Indicator

Press this button to select component (YCbCr, YPbPr, RGB) signal input, indicator turns blue.

(5) DVI/VGA Button and Indicator

Press this button to select signal input among DVI/HDMI/VGA, indicator turns blue.

(6) SDI1 Button and Indicator

Press this button to select SDI1 signal input, indicator turns blue.

(7) SDI2 Button and Indicator

Press this button to select SDI2 signal input, indicator turns blue.

(8) MENU Button

Press this button to display the OSD menu, and press it again to exit the menu.
Clear the Marker display.

Clear Display mode.

Turn off the shortcut menu.

(9) LEFT Button

When in OSD main menu, press this button to select different sub-menus leftwards; when in sub-menu, press this button to adjust the parameter of the selected item leftwards.

When not in OSD menu, press this button for shortcut to sound volume adjustment.

When in shortcut function status, press this button to move operation bar leftwards.

(10) RIGHT Button

When in OSD main menu, press this button to select different sub-menus rightwards; when in sub-menu, press this button to adjust the parameter of the selected item rightwards.

When not in OSD menu, press this button for shortcut to sound volume adjustment.

When in shortcut function status, press this button to move operation bar rightwards.

(11) UP Button

In OSD sub-menu, press this button to move the icon upwards; when the icon is at the first item of sub-menu, press this button to return to main menu.

When the screen is single window picture, press this button for shortcut to show Marker display, and press this button again to clear Marker from screen. (For exact marker size, please choose in the OSD menu)

When in PIP/PBP status, press this button to select the window for operation.

(12) DOWN Button

In OSD menu, press this button to enter sub-menu; when in sub-menu, press this button to move icon downwards.

When in single window picture, press this button for shortcut to show Brightness Histogram, and press this button again to clear Brightness Histogram from

screen.

When in PIP/PBP status, press this button for shortcut to swap between the two windows pictures.

(13) ZOOM Button

Press button to choose any part to zoom in.

(14) PIP Button

Press this button for window layout among single, PIP, PBP mode.

(15) BRIGHT Button

Press this button into brightness shortcut menu and then press LEFT and RIGHT button to adjust image brightness.

(16) CHROMA Button

Press this button into color shortcut menu and then press LEFT and RIGHT button to adjust color saturation.

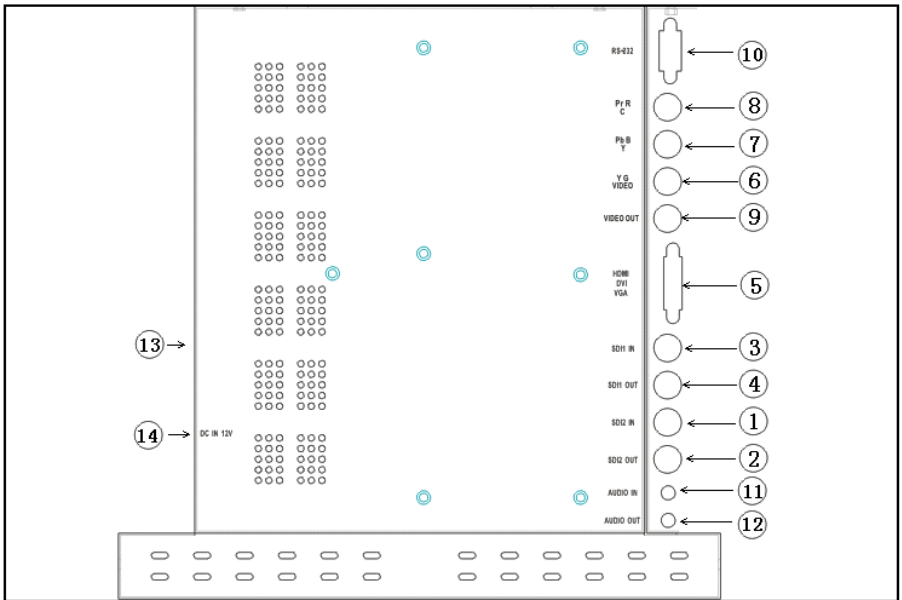
(17) CONTRAST Button

Press this button into contrast shortcut menu and then press LEFT and RIGHT button to adjust contrast.

(18) Speaker:

Stereo audio output.

Rear View



- (1) **SDI1 IN:** SDI1 input (3G/HD/SD-SDI auto detect).
- (2) **SDI1 OUT:** SDI1 Reclock loop through output, without enervation.
- (3) **SDI2 IN:** SDI2 input (3G/HD/SD-SDI auto detect).
- (4) **SDI2 OUT:** SDI2 Reclock loop through output, without enervation.
- (5) **DVI/HDMI/VGA:** DVI input, support DVI signal, HDMI signal (via HDMI-DVI connector), and VGA signal (via VGA-DVI connector).
- (6) **Y/G VIDEO IN**
Video input share with Y input of YPbPr, you can select video, Y of YPbPr or G of RGB signal input.
- (7) **Pb/B Y(Y/C) IN**
Y of YC input share with Pb of YPbPr, you can select Y of YC, Pb or YPbPr or B of RGB signal input.
- (8) **Pr/R C(Y/C) IN**
C of YC input share with Pr of YPbPr, you can select of C of YC, Pr of YPbPr or R of

RGB signal input.

(9) VIDEO OUT: Video (composite) output.

(10) RS-232: For remote control/GPI, Tally light control and Marker On/off, etc.

(11) AUDIO IN: Analogue audio in.

(12) AUDIO OUT: Analogue audio out.

(13) ON/OFF: Power on/off.

(14) DC 12V IN

●OSD Menu

Menu Structure

Picture

Picture Mode

Brightness

Contrast

Sharpness

Colour

Hue

Color Temp

Img. Adj

Image Size

Scan Mode

H position (only for VGA signal)

V position (only for VGA signal)

DVI YUV color space (only for HDMI signal)

CTI (Color Transient Improvement)

Gray Mode

Blue Mode

Fast Mode

H/V Delay (only for SDI signal)

Luma Histogram

Chroma Vector

Setup

OSD Settings

Transparency

OSD Timeout

H position

V position

Marker Setting

Marker Enable

Marker Select

Center Marker

Safety Area

Marker Level

Marker Mat

Zoom in

Format Display

Power Saving

Screen Saver

Factory Reset

Audio

Volume

Headphone Volume

Audio Channel (only for SDI signal)

Audio Level Meter (only for SDI signal)

PIP/PBP

Layout

Main Window Source

Second Window Source

PIP Size

PIP Position

Alpha Blend

Swap

Status

Source & Format

Fh

Fv

Color Temp

Image Size




Scan Mode

CTI

Screen Saver

Power Saving

Menu Operation

1. Press POWER button to switch on the monitor, then press MENU button, the OSD menu will show on screen. Press the MENU button again to quit the OSD menu.
2. In OSD menu, press LEFT and RIGHT buttons to choose different menu items: Picture, Image adjustments, Setup, PIP/PBP, and system status.
3. Press UP and DOWN buttons to enter or exit sub-menu. If sub-menu items are marked by the drop-down sub-menu group with icon ; turn it to open or close the drop-down sub-menu group.
4. In sub-menu, press LEFT and RIGHT buttons to select the sub-menu item operation.
5. When the menu window is not enough to show all the sub menu items, it will show up/down arrow   for the rest items.

Menu Item Description

A. Picture

Menu item	Setting	Description
Picture mode	Dynamic Standard Soft Custom	The parameters of brightness, contrast, sharpness, color, hue in three modes: dynamic, standard, soft. Custom is for user definition
Brightness	0—100	Brightness Adjustment
Contrast	0—100	Contrast Adjustment
Sharpness	0—15	Sharpness Adjustment
Color	0—100	Saturation Adjustment
Hue	0—100	Color Adjustment
Color Temp	5600K 6500K 9300K Custom: Red Gain 0-255 Green Gain 0-255 Blue Gain 0-255 Red offset 0-255 Green offset 0-255 Blue offset 0-255	Three modes of the fixed color temperatures selection (5600K, 6500K, 9300K) and a custom selection. "Custom" is for user definition, to adjust the gain value and offset value of Red, Green and Blue. It will save the color temperature setting automatically.

B. Img. Adj

Menu Item	Setting	Description
Image Size	Original Ratio	original ratio of the signal source
	Full Screen	Full screen image

	1:1	At 1:1 pixel-to-pixel display. It is invalid in PIP sub-screen and PBP mode.
	16:9	16:9 aspect ratio
	4:3	4:3 aspect ratio
Scan Mode	100% Scan Over Scan 5%	100% Image display 95% Image display
DVI/ YUV Color space	ON OFF	Select it when HDMI input signal is YUV color space. Select it when HDMI input signal is RGB color space (For HDMI signal only)
CTI	ON OFF	Color Transient Improvement, for better color transition
Gray mode	ON OFF	Monochrome mode with black and white image
Blue Mode	ON OFF	Display in Blue only
Fast Mode	ON OFF	Interlaced scanning without converting into progressive scan
H/V Delay	ON OFF	Display the blanking period of SDI input signal
Luma histogram	ON OFF	System automatically analyzes the input signal's brightness distribution with a diagram on the screen. X axis shows the brightness sampling value, the range is 0 ~ 1023, the higher value means the higher

		brightness. Y axis shows the percentage of the brightness in the entire frame picture.
Chroma Vector	ON OFF	Vector analysis for color bar signal input. The vector scope has U and V values.

C. Setup

Menu Item		Setting	Description
Language		English	Menu Language Display: English
OSD Settings: Transparency		0—100	Menu background from opaque to completely transparent selection
OSD Timeout		4—30	Menu disappear time when no button operation
H Position		0-100	Menu position horizontal adjust
V Position		0-100	Menu position vertical adjust
Marker setting	Marker enable	ON OFF	All markers on All markers off
	Marker Select	OFF 4:3 16:9 15:9 14:9 13:9 1.85:1 2.35:1	NO marker display Marker display 4:3 Marker display 16:9 Marker display 15:9 Marker display 14:9 Marker display 13:9 Marker display 1.85:1 Marker display 2.35:1

	Center Marker	ON OFF	Display center mark No display center mark
	Safety Area	OFF 80% 85% 88% 90% 93%	No Safety Area display 80% Safety Area display 85% Safety Area display 88% Safety Area display 90% Safety Area display 93% Safety Area display
	Marker Level	White Grey Black	Marker line is White Marker line is Grey Marker line is Black
	Marker Mat	OFF Grey Black Transparency	Turn off Fill up the background beyond marker Background beyond marker filled up with grey, filled up with black Background beyond marker transparent
	Zoom in		Zoom in any part of the picture, to watch picture details more clearly, and assist for focus.
Format Display	OFF ON Auto	Turn off the display info of signal format. Turn on the display info of signal format. Display info of signal format will automatically disappear 4 seconds after operation	
Power Saving	ON	Enter power-saving mode, the	

	OFF	system will switch off some functions when the main input is without signal more than 10 minutes. This feature is invalid in PIP/PBP status.
Screen Saver	ON OFF	The system will enter screen saver mode when the main input is without signal. This feature is invalid in PIP/PBP status.
Factory Reset		Press RIGHT button, the system restore to factory setting
Swap (this item shows in PIP mode)		In PIP and PBP, press RIGHT button to switch the signal pictures between the two windows (main picture and sub picture)

D. Audio

Menu item	Description	
Volume	0—100	Speaker volume adjustment
Headphone Volume	0—100	Headphone volume adjustment
Audio Channel	CH1&CH2 CH3&CH4 CH5&CH6 CH7&CH8	SDI embedded audio CH1 &CH2 SDI embedded audio CH3 & CH4 SDI embedded audio CH5 & CH6 SDI embedded audio CH7 & CH8
Audio Level Meter	ON OFF	Turn on/off audio level meter display

E. PIP/PBP

Menu item	Setting	Description
layout	Main Window PIP PBP	Display only a single signal picture on screen Display two signals pictures simultaneously on screen, the sub picture in the main picture. Display two signals pictures side-by-side simultaneously on screen, the sub picture at the right side of the main picture. Note: In PIP/PBP mode, one signal is SDI, the other signal is any of other input signals. The two pictures should be different signal formats.
Main Window Source	Video S-Video YPbPr SDI1 SDI2 VGA HDMI	Main Window select signal input between Video/ S-Video/ Component/ SDI1/SDI2/VGA/ HDMI (Note: Component is compatible with RGB, YCbCr, YPbPr)
Second Window Source (this item shows in PIP/PBP)	Video S-Video YPbPr SDI1 SDI2 VGA HDMI	Second Window select signal input between Video/ S-Video/ Component/ SDI1/SDI2/ VGA/HDMI (Note: Component is compatible with RGB, YCbCr, YPbPr)

PIP Size (this item shows in PIP mode)	<p>Large</p> <p>Middle</p> <p>Small</p>	<p>The second window is Large size</p> <p>The second window is medium size</p> <p>The second window is small size</p>
PIP position (this item shows in PIP mode)	<p>Left-Up</p> <p>Right-Up</p> <p>Medium</p> <p>Right-Down</p> <p>Left-Down</p> <p>Custom</p>	<p>The second window in the left-up corner of screen.</p> <p>The second window in the right-up corner.</p> <p>The second window in the medium.</p> <p>The second window in the right-down corner.</p> <p>The second window in the left-down corner.</p> <p>The second window is adjusted by user</p> <p>When the user select this option, it will automatically pop up at the following "horizontal position" and "vertical position" menu items</p>
H Position (this item shows when PIP position select "Custom")	0—100	Horizontal position adjustment of picture-in-picture's second window
V Position (this item shows when PIP position select "Custom")	0—100	Vertical position adjustment of picture-in-picture's second window
Alpha Blend	0—100	Adjustment of PIP's second

(this item shows in PIP mode)		window and the main window alpha blend degrees. When the value is 0, the second window is translucent blend with the main window; when the value is 100, the second window blend directly to the main screen.
Swap (this item shows in PIP mode)		In PIP and PBP, press RIGHT button to swap the signal pictures between the two windows (main window and second picture)

F. Status

Menu item	Description
Source & Format	The current window's input signal source and resolution
Fh	H frequency of the current window's input signal
Fv	V frequency of the current window's input signal
Color Temp	Current Color Temperature
Image Size	Current selected image size
Scan Mode	Current scan mode
CTI	Color Transient Improvement mode status
Screen Saver	System screen saver mode status
Power Saving	System power saving mode status

●Factory Reset

This function is to reset the monitor to factory preset.

Please try to reset the monitor, when the following situations occur:

1. The monitor parameters are adjusted incorrect by user.
2. The monitor picture or sound is abnormal, and not due to hardware problem.

To do factory reset, please follow the below five steps:

1. Press MENU button to enter main menu.
 2. Select the item SETUP.
 3. Select the item Factory Reset.
 4. Follow the instruction to turn the direction button, the screen will refresh.
 5. Power off the monitor, and must wait for at least 5 seconds, then restart the monitor.
- The monitor resets to factory preset.

● Remote Control

1. Hardware connection

Connect the monitor's RS-232 serial port to the computer to remote control the monitor by universal serial communication software.

2. Software Configuration

Start communication software, configure the serial communication parameters, sending communications test command, if the return value is correct, you can send control command.

Serial port settings:

Baud Rate: 19200

Parity: None

Data bits: 8

Stop bit: 1

Flow Control: None

Communications test:

Communications test command	Return value	Description
BE EF 01 05 00 D1 FA 01 02 00 00 00	1E BE EF 01 04 00 37 3D 01 02 00 01	Return value is correct, the communication setup is normal

Warranty Card

User		Tel		Postal Code	
Address					
Product Model			Serial Number		
Dealer			Purchase Date		

Maintenance Record

Date	Contents of Reparation	Replacement parts		Repairer	User Signature
		Name	Qty		

This warranty card should be filled in immediately when purchasing

Please keep a proper record of this warranty card.

As the continuous improvement of the products, this will subject to change without notice

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